

**Table 1: Solutions to Prevent Electrocutions**

Source	Hazard	Solution
Power line- direct contact	Contact with live wire	<ul style="list-style-type: none"> <li>• Use insulating blankets, cover-up equipment, live-line tools and insulating line hose<sup>1</sup></li> <li>• Use Building Information Modeling (BIM) for safety planning<sup>1</sup></li> <li>• Wear personal fall arrest system (PFAS) in case of shocks while working at heights<sup>2</sup></li> <li>• Don't use flexible wiring where it may get damaged<sup>3</sup></li> </ul>
	Contact with voltage while working on de-energized power lines	<ul style="list-style-type: none"> <li>• Verify appropriate transfer switch is installed and in use prior to commencing work<sup>1</sup></li> <li>• Test whether circuits are de-energized, then ground circuits, before starting work<sup>3</sup></li> <li>• Use temporary protective grounds<sup>1</sup></li> <li>• Use lock out tag out (LOTO) devices<sup>1</sup></li> </ul>
	Contact with underground electric cable	<ul style="list-style-type: none"> <li>• Use geospatial augmented reality system to locate underground cables<sup>1</sup></li> </ul>
Power line- indirect contact	Live power line touches ladder in use	<ul style="list-style-type: none"> <li>• Use non-conductive ladders<sup>1</sup></li> </ul>
	Live power line touches construction equipment in use	<ul style="list-style-type: none"> <li>• Use overhead powerline proximity warning devices for heavy equipment<sup>1</sup></li> <li>• Keep equipment a safe distance from uninsulated overhead power lines and service entrance cables<sup>2</sup></li> </ul>
Lightning	Working outside during a storm	<ul style="list-style-type: none"> <li>• Ring ground<sup>1</sup></li> <li>• Go inside out of the rain until safe to return to work<sup>3</sup></li> </ul>
Electric devices	Voltage spike or transfer from electrical device in use	<ul style="list-style-type: none"> <li>• Use surge protection devices (SPD)<sup>1</sup> such as circuit breakers, fuses, ground fault circuit interrupters (GFCIs), and arc-fault circuit interrupters<sup>4</sup></li> <li>• Regularly inspect and maintain tools<sup>4</sup></li> <li>• Take frayed wires and other damaged electrical parts out of service immediately<sup>5</sup></li> <li>• Only use correct size and type of wire<sup>3</sup></li> </ul>
	Contact with energized conductors	<ul style="list-style-type: none"> <li>• Use proper cover-up equipment installed by trained worker<sup>1</sup></li> </ul>
	Use of electrified devices in wet conditions	<ul style="list-style-type: none"> <li>• Use ground fault circuit interrupters (GFCIs)<sup>1</sup></li> <li>• Avoid working in wet conditions, wearing wet clothes, or standing in water<sup>3</sup></li> </ul>